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M E M O R A N D U M

Date: July 18, 1994  
To: Leah Evison, U.S. EPA  
From: Liz Bartz, EARTH TECH *EUB* CC: 04011, 32  
Subject: ALBION-SHERIDAN TOWNSHIP LANDFILL TEST PITTING

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Test pitting at the Albion-Sheridan Township Landfill site was performed during the week of June 6, 1994. The Michigan Department of Natural Resources (MDNR) contracted ABB Environmental to perform the work. The test pitting subcontractor to ABB was Piedmont Remedial Services (PRS). Earth Tech performed field oversight on behalf of the U.S. EPA under the ARCS contract. Selected photographs taken during test pitting are included as an attachment to this memorandum. A test pit location map is also attached.

JUNE 6, 1994

The MDNR, ABB, and PRS mobilized to the site. Earth Tech was not present on this day.

JUNE 7, 1994

7:55 am: Liz Bartz (Earth Tech SPM) and Kurt Osterman (Earth Tech Field Representative) arrived on-site.

8:00 - 10:00 am: Test pitting crew set up on Test Pit #1, on the north end of the property.

10:10 - 10:48 am: Performed test pitting at Test Pit #1. One crushed drum carcass was found. Other material included wood, metal debris, tin, and foundry sand. The MDNR videotaped excavation activities. The total depth of the excavation was 7 feet. The excavation was backfilled. The original surface material was not segregated and place back on top of the excavation as indicated in the work plan. No abnormal air monitoring readings were reported to Earth Tech staff.

11:05 - 11:30 am: Performed test pitting at Test Pit #2 which is just south of Test Pit #1. One crushed drum carcass was found. The material present in this test pit was similar to what was found in Test Pit #1. The MDNR geophysicist wanted to excavate in another area close to Test Pits #1 and 2 and the MDNR project manager made the decision not to.



1:25 - 1:50 pm: Performed test pitting at Test Pit #3. No drums were present in this test pit. The excavated materials appeared to be typical municipal landfill debris.

2:18 - 2:26 pm: Performed test pitting at Test Pit #4. The excavated materials appeared to be typical municipal landfill debris including: small pieces of metal, glass, and plastic.

3:33 - 4:15 pm: Performed test pitting at Test Pits #5 and 6. Landfill cover appears to be sandy soils at both sites. Found glass, metals, plastic, rags and one crushed drum carcass in Test Pit #5. The dimensions of Test Pit #5 was approximately 14 feet long and 7 feet deep. Found similar material in Test Pit #6, however, no drums were encountered. The total depth of Test Pit #6 was approximately 7 feet.

#### Summary of June 7, 1994

The weather was warm and sunny with a highs in the high 70s, low 80s. There were a total of 21 people on site (including 15 vehicles); ABB (5), PRS (4), MDNR (10) and Earth Tech (2).

A total of 6 test pits were performed. The MDNR videotaped the excavating process. Most of the excavations took approximately 10 to 15 minutes to perform. Most of the excavations were roughly 14 feet in length and 7 feet deep. All test pits had sandy soil covers and contained garbage consisting of glass, metal, wood, plastic. Crushed drum carcasses were present in several of the test pits, but the drums did not contain any material. All soil and waste material were placed on plastic during excavation and then subsequently replaced back into the excavation.

Interim times were spent, moving the equipment from location to location and setting up personal protective gear. The investigators operated in what appeared to be a safe manner. All personal protective equipment was placed in garbage bags.

#### JUNE 8, 1994

6:30 am: Kurt Osterman arrived on-site, test pitting crew set up on Test Pit #7.

8:20 - 8:30 am: Performed test pitting at Test Pit #7. No drums were present in this test pit. The landfill material encountered included typical municipal landfill debris including: small pieces of metal, glass, and plastic. A hot water heater and refrigerator were also encountered. The total depth of the excavation was 7 feet.

8:40 - 9:00 am: Performed test pitting at Test Pit #8 which is approximately 15 feet southwest of Test Pit #7. Investigators found one intact drum, with a "Northwest Chemical Co. Detroit, MI" label. The drum was filled at this time with a gray to brownish solid material, possibly ash? A sample of this material was not collected.

~9:30 am - 6:30 pm: Performed test pitting at Test Pit #9. The first drum nest encountered was of 5 drums located 3-4 feet below the ground surface. One of these 5 drums was leaking and this was overpacked. The liquid in this drum (Drum #1) had a cloudy appearance and registered 150 ppm on the HNu. According to one observer next to the excavation, the material looked like silver paint floating on water. A sample was collected of this material and labeled, TP-9-1.

At 10:18 am, another leaking drum (Drum #2) was removed and overpacked. According to one observer next to the excavation, this drum contained solid material. A third drum (Drum #3), containing 30 - 40 gallons of a brown liquid, was also removed from the excavation and overpacked. A sample of this liquid was collected and labeled, TP-9-3. The liquid registered 1500 - 2000 ppm on the HNu. A fourth drum (Drum #4) was also removed and overpacked. The fourth drum reportedly contained solid material.

At 10:51 am, it was reported that on the northwest wall of the excavation, stacked drums were apparent. A decision was made to excavate deeper to try and assess the vertical extent of drums. The test pit was extended to approximately 12 feet deep. Approximately 7 to 8 scattered drums were observed at this depth. A fifth drum (Drum #5) was removed from the excavation and overpacked. The excavation continued at this point in a westerly manner to determine how far west the drums extended. At 12:30 pm, drums were still lined up in the excavation (some upright, some on their sides). The drums appear to be trending north-south. Some of the drums are crushed and empty.

3:00 pm: The excavation was extended to the east to determine how far the drums extended. A drum (Drum #6) was broken during excavation and a white gelatinous material (paint sludge?) spilled out. The drum was placed on the plastic and transferred as quickly as possible to a drum overpack. A sample of this material was collected and labeled, TP-9-03.

4:00 pm: The backhoe was moved to a southerly location within Test Pit #9. The excavators hit another drum (Drum #7) which contained what appeared to be the same material as the previous drum (white paint sludge?). As the drum was removed from the excavation, white sludge-like material poured out onto the ground. The drum was overpacked and the material was also shoveled into the drum overpack. No sample of this material was collected for analysis.

4:45 pm: The sludge had been "cleaned up". At this point, the excavation was approximately 40 feet (E-W) x 80 feet (N-S).

5:35 pm: The investigators hit another drum. The drum was leaking and was going to be removed and overpacked. A sample of the material was collected and labeled TP-9-4.

6:15 pm: Apparently, this drum had a large hole in it and most of the liquid in the drum drained out. A decision was made to leave this drum in the excavation.

#### Summary of June 8, 1994

The weather was cloudy with moderate temperatures (high 60s). There were a total of 20 people on site. ABB (5), PRS (4), MDNR (10) and Earth Tech (1).

A total of 3 test pits were performed. The MDNR videotaped the excavating process. Investigators spent 3/4 of the day excavating Test Pit #9. According to an observer next to the excavation, the excavation was 40 feet x 80 feet and the drums were stacked 2 high). The extent of the drums was not completely defined. Additional excavating was performed the next day.

Interim times were spent, moving the equipment from location to location and setting up personal protective gear. The investigators operated in what appeared to be a safe manner. All personal protective equipment was placed in garbage bags.

#### JUNE 9, 1994

7:30 am: Kurt Osterman arrived on-site, test pitting crew set up on Test Pit #10.

8:35 - 9:30 am: Performed test pitting at Test Pit #10. No drums were present in this test pit. The landfill material encountered included typical municipal landfill debris including: small pieces of metal, glass, and plastic. The pit extended 10 feet in length and 15 feet in depth. The investigators moved approximately 15 feet to the west and performed another test pit (still within the Test Pit #10 locale). This test pit extended to 7 feet deep and no drums were encountered.

9:50 am: Investigators returned to Test Pit #9 to further define it's extent. A drum (Drum #8) was encountered in the SE corner at approximately 10:20 am. A sample was collected and labeled TP-9-5. There was only enough material to sample for VOCs. The material in the drum registered 450 ppm on the HNu. At this point, the MDNR SPM indicated to the Earth Tech representative that investigators felt that they had adequately defined the extent of the drums in the NE corner. They were going to collect a sample of the white sludge-like material from Drum #7 which they had overpacked yesterday. Investigators encountered another drum that they sampled and labeled the sample TP-9-6. The drum, however, was left in the ground.

1:38 pm: Investigators removed one more drum (Drum #9) from the west side of the excavation. The drum was removed and overpacked. A sample was collected and labeled TP-9-7. The sample registered 550 ppm on the HNu. Additionally, the MDNR SPM told the Earth Tech representative that he was going to request that ABB collect two additional

samples from two drums that had been overpacked the previous day (TP-9-8 and TP-9-9). The dimensions of Test Pit #9 were irregular. See attached sketch.

4:30 pm: Performed test pitting at Test Pit #11. This was located behind the Prader home. No drums were present in this test pit. The landfill material encountered included municipal-type trash and sand. The pit extended 15 feet in depth. This was the final test pit performed.

#### Summary of June 9, 1994

Three additional test pits were performed today (2 test pits at the Test Pit #10 location and one test pit at the Test Pit #11 location). No drums were present at these locations. Investigators revisited Test Pit #9 and removed two additional drums.

There are a total of nine overpacked drums which were left on the decon pad built by Earth Tech for the RI Investigation. A total of nine samples were collected in addition to one duplicate sample.

Ensuing discussions during the day with the Earth Tech representative, MDNR SPM, and MDNR geophysicist led the Earth Tech representative to believe that it was going to be difficult to estimate the number of drums in Test Pit #9. The MDNR geophysicist indicated that he felt there were between 200 and 360 drums. The MDNR SPM indicated he felt that the number was lower than the number of drums estimated by the MDNR geophysicist. Additionally, the MDNR geophysicist indicated that he would advocate that the U.S. EPA be required to remove the drums from the landfill.

#### JUNE 10, 1994

No test pits were performed. The overpacked drums were transferred to the decon pad. There was approximately 10 gallons of decon water left in the poly tank at the site. The MDNR SPM indicated to the Earth Tech representative that they were working on who's responsibility it was to dispose of the drums and the decon water.

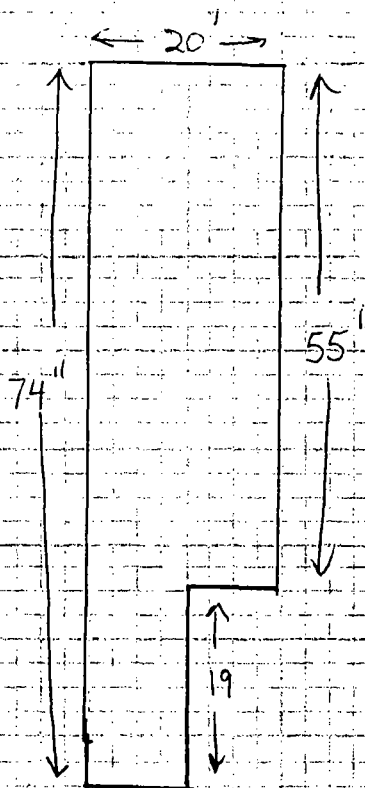
All of the test pits had been filled back in, however, trash was evident at the surface. This was an earlier concern of Earth Tech's and the U.S. EPA. We had asked whether they were going to place clean fill at the surface. The investigators had indicated that they will segregate the cover material during excavation and place this back on the surface. This did not occur.

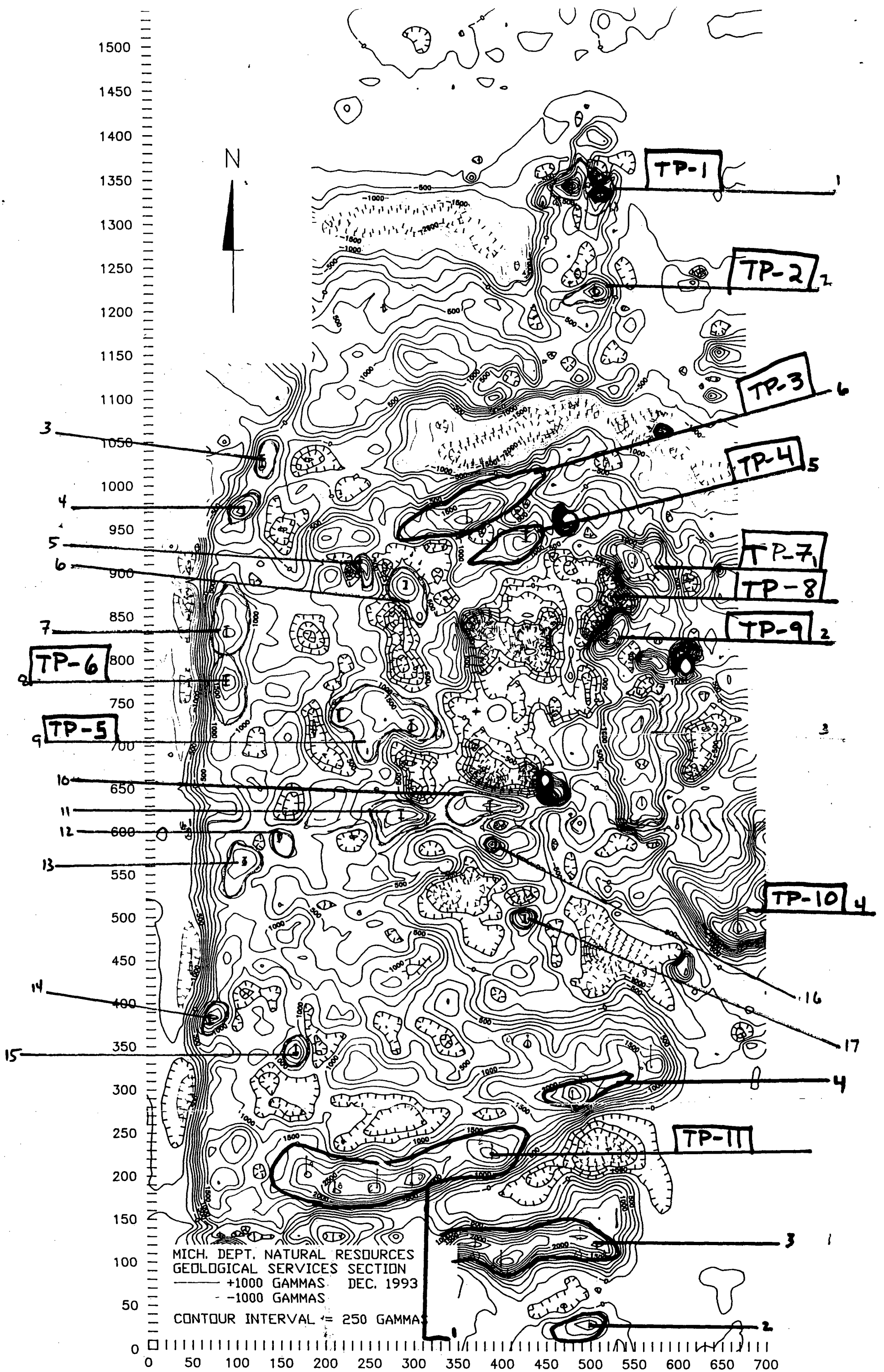
The MDNR indicated that they would take the garbage bags filled with personal protective gear and dispose of them.

# Calculation Sheet

Computed by EUB Subject TEST PITS Sheet 1 of 1  
 Checked by \_\_\_\_\_ Client ALBION Job No. 04011 Date 7-18-94

APPROXIMATE DIMENSIONS OF  
 TEST PIT # 9





ALBION-SHERIDAN TWP LANDFILL

SCALE 1 inch = 100 Feet

TEST PIT  
LOCATIONS



Client Albion-Sheridan Landfill  
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### *Photographic Log*



**Comments:** Test Pit #1: Exclusion zone and support zone.



**Comments:** Test Pit #2: Video cam and fire extinguisher evident.



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### *Photographic Log*



**Comments:** Test Pit #3: Excavation complete, restoration resulted in trash left at surface.



**Comments:** Air monitoring vehicle set up for Test Pits #3 and #4.

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## Photographic Log



Comments: Test Pit #5 location



Comments: Test Pit #9: Decanting material from leaking drum into drum overpack.



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## *Photographic Log*



**Comments:** Test Pit #9: Encapsulating leaking drum into drum overpack.



**Comments:** Test Pit #9: Removing leaking drum from excavation. Notice liquid pouring out of it. Note liquid running down the slope.



## Photographic Log



**Comments:** Test Pit #9: Decanting liquid into drum overpack. Liquid noticeable on slope.



**Comments:** Test Pit #9: Sampling drum left in place.



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## Photographic Log



**Comments:** Test Pit #9: Drum left in place.



**Comments:** Test Pit #9: Seven drum overpacks. Note drum second from left, material spilled on outside.



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## *Photographic Log*



**Comments:** Test Pit #9: After excavation and backfilling test pit, nine drum overpacks result.



**Comments:** Test Pit #9: Post excavation and backfill.



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## *Photographic Log*



**Comments:** Deconning backhoe at the conclusion of the test pitting.



**Comments:** Final resting place on nine drum overpacks.